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[54] **METHOD OF PRODUCING PLASMA DISPLAY PANEL WITH PROTECTIVE LAYER OF AN ALKALINE EARTH OXIDE**

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[58] **Field of Search** 117/3, 88, 92, 117/101, 103, 104, 944; 313/572, 581, 582

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[57] **ABSTRACT**

The first object of the present invention is to provide a PDP with improved panel brightness which is achieved by improving the efficiency in conversion from discharge energy to visible rays. The second object of the present invention is to provide a PDP with improved panel life which is achieved by improving the protecting layer protecting the dielectrics glass layer. To achieve the first object, the present invention sets the amount of xenon in the discharge gas to the range of 10% by volume to less than 100% by volume, and sets the charging pressure for the discharge gas to the range of 500 to 760 Torr which is higher than conventional charging pressures. With such construction, the panel brightness increases. Also, to achieve the second object, the present invention has, on the surface of the dielectric glass layer, a protecting layer consisting of an alkaline earth oxide with (100)-face or (110)-face orientation. The protecting layer, which may be formed by using thermal Chemical Vapor Deposition (CVD) method, plasma enhanced CVD method, or a vapor deposition method with irradiation of ion or electron beam, will have a high sputtering resistance and effectively protect the dielectrics glass layer. Such a protecting layer contributes to the improvement of the panel life.

27 Claims, 9 Drawing Sheets